

increasing oxygen concentration on the surface of the wafer to promote the formation of an oxide by performing the polishing in the presence of the hydrogen peroxide water.

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48. (Once Amended) The method according to claim 44, wherein the method includes dropping the chemical solution onto the surface of the semiconductor wafer.

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49. (Once Amended) The method according to claim 44, wherein the method includes adding a solid powder oxidizing agent to the chemical solution.

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52. (Once Amended) The method according to claim 49, wherein the method includes dropping the chemical solution, in which the solid powder is dispersed, onto the surface of the semiconductor wafer.

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55. (Once Amended) The method according to claim 53, wherein the method includes placing the solid powder on a member that is moved relatively to and contacts the surface of the semiconductor wafer when the surface is polished.

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61. (Once Amended) A mechanochemical polishing apparatus, comprising:  
a table on which a semiconductor wafer is held;  
a polishing cloth facing the holding table and movable relatively with respect to the semiconductor wafer to polish a surface of the semiconductor wafer using abrasive grains made of chromium (III) oxide; and

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supply means for supplying a chemical solution including the abrasive grains and hydrogen peroxide water to the surface of the semiconductor.

62. (Once Amended) The apparatus according to claim 61, wherein said supply means is an injector located above the member for supplying the chemical solution to the surface of the semiconductor.

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67. (Once Amended) The apparatus according to claim 61, wherein the polishing cloth is made of one selected from a group consisting of synthetic fibers, glass fibers, natural fibers, synthetic resin and natural resin.

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68. (Once Amended) The apparatus according to claim 61, wherein the polishing cloth includes an unwoven type polishing cloth in which complex fabric bodies are impregnated with resin serving as a binding material between fibers or in which a resin layer has a continuously foamed structure.

Supply  
69. (Once Amended) The apparatus according to claim 61, wherein the polishing cloth is made of formed polyurethane.

70. (Once Amended) A method of manufacturing a semiconductor substrate comprising: scrubbing a surface of the substrate with a polishing cloth and an abrasive that includes superfine grains of diamond; and

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polishing the surface using a chemical solution that includes abrasive grains of chromium

(III) oxide and hydrogen peroxide water to supply oxygen to the surface of the substrate.

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